We claim:

1. A substantially purified mammalian CD40 associated protein (CAP) or an active fragment thereof, which can bind CD40.

2. The mammalian CAP of claim 1, wherein said mammal is human.

3. Substantially purified human CAP-1, having substantially the amino acid sequence shown in Figure 1 ~~(SEQ ID NO: 1)~~ (SEQ ID NO:2).

4. A reagent that specifically binds to the CAP of claim 1.

5. The reagent of claim 4, wherein said reagent is CD40.

6. The reagent of claim 4, wherein said reagent is an anti-CAP antibody.

7. A substantially purified nucleic acid molecule encoding a mammalian CAP.

8. The nucleic acid molecule of claim 7, wherein said mammal is human.

9. A vector, comprising the nucleic acid molecule of ~~claim~~ 7.

10. A host cell, comprising the vector of claim 9.

11. A substantially purified nucleic acid molecule encoding human CAP-1, having substantially the nucleotide sequence shown in Figure 1 ~~(SEQ ID NO: 2)~~ (SEQ ID NO:1).

12. A nucleotide sequence, comprising at least ten nucleotides that hybridize under relatively stringent conditions to the nucleic acid molecule of claim 7.

13. A method of identifying an effective agent that alters the association of a CAP with a second molecule, comprising the steps of:

a. contacting the CAP with the second molecule under suitable conditions, which allow said CAP and said second molecule to bind with an agent suspected of being able to alter the association of said CAP with said second molecule; and

b. detecting the altered association of said CAP with said second molecule, wherein said altered association identifies an effective agent.

14. The method of claim 13, wherein contacting step a. further comprises:

a1. contacting the CAP and the second molecule under suitable conditions, which allow said CAP and said second molecule to bind;

a2. thereafter contacting said CAP and said second molecule with an agent suspected of being able to alter the association of said CAP with said second molecule.

15. The method of claim 13, wherein said second molecule is CD40.

16. The method of claim 13, wherein said second molecule contains a tumor necrosis factor receptor-2-associated factor (TRAF) domain.

17. The method of claim 16, wherein said second molecule is selected from the group consisting of CAP-1, TRAF1 and TRAF2.

18. The method of claim 13, wherein said second molecule is a nucleotide sequence.

19. The method of claim 13, wherein said CAP is CAP-1.

20. The method of claim 13, wherein said altered association is detected by measuring the transcriptional activity of a reporter gene.

21. The method of claim 13, wherein said contacting is *in vitro*.

22. The method of claim 13, wherein said contacting is *in vivo*.

23. The method of claim 13, wherein said contacting is in a mammalian cell.

24. The method of claim 13, wherein said contacting is in a yeast cell.

25. The method of claim 13, wherein said effective agent is a drug.

26. The method of claim 13, wherein said effective agent is a peptide.

27. The method of claim 26, wherein said peptide is a mutant CAP-1.

28. A method for identifying an effective agent that alters the association of a CAP with a second molecule in a test sample, comprising the steps of:

a. contacting the test sample with an agent suspected of being able to alter the association of the CAP with the second molecule; and

b. detecting the altered association of said CAP with said second molecule, wherein said altered association identifies an effective agent.

29. The method of claim 28, wherein said effective agent is a drug.

30. The method of claim 28, wherein said second molecule is CD40.

31. The method of claim 28, wherein said second molecule contains a TRAF domain.

32. The method of claim 31, wherein said second molecule is selected from the group consisting of CAP-1, TRAF1 and TRAF2.

33. The method of claim 28, wherein said second molecule is a nucleotide sequence.

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34. The method of claim 28, wherein said CAP is CAP-1.

35. A method for altering the association of a CAP with a second molecule in a cell, comprising contacting the cell with an effective agent.

36. A method for modulating a function of a cell, comprising contacting the cell with an effective agent.

37. The method of ~~claim~~ 36, wherein said function is immunoglobulin class switching.

38. The method of claim 36, wherein said function is cell proliferation.

39. The method of claim 36, wherein said function is apoptosis.

40. A method for identifying a CAP agonist, which increases the level of expression of a CAP in a cell, comprising:

a. introducing a molecule suspected of being a CAP agonist into the cell; and

b. measuring the level of expression of the CAP in said cell, wherein an increased level of expression of said CAP identifies the CAP agonist.

41. A method of increasing the level of expression of a CAP in a cell, comprising introducing a CAP agonist into the cell.

42. The method of claim 41, wherein said agonist is a nucleic acid molecule encoding CAP-1.

43. A method for identifying a CAP antagonist, which decreases the level of expression of a CAP in a cell, comprising:

a. introducing a molecule suspected of being a CAP antagonist into the cell; and

b. measuring the level of expression of the CAP in said cell, wherein a decreased level of expression of said CAP identifies the CAP antagonist.

44. A method for decreasing the level of expression of a CAP in a cell, comprising introducing a CAP antagonist into the cell.

45. The method of claim 44, wherein said antagonist is a nucleotide sequence that hybridizes to a nucleic acid molecule encoding CAP-1.

46. The method of claim 44, wherein said nucleic acid molecule is DNA.

47. The method of claim 44, wherein said nucleic acid molecule is RNA.

48. A method for modulating a function of a cell, comprising introducing into said cell a molecule that alters the level of expression of a CAP in said cell.

49. The method of claim 48, wherein said molecule is a CAP agonist.

50. The method of claim 48, wherein said molecule is a CAP antagonist.

51. The method of claim 48, wherein said function is immunoglobulin class switching.

52. The method of claim 48, wherein said function is cell proliferation.

53. The method of claim 48, wherein said function is apoptosis.

54. A method for detecting the presence of a CAP in a test sample, comprising the steps of:

a. obtaining the test sample;

b. contacting said test sample with the reagent of claim 4 under suitable conditions, which allow specific binding of said reagent to the CAP; and

c. detecting said specifically bound reagent, which indicates the presence of said CAP.

55. The method of claim 54, wherein said detecting identifies an abnormal level of a CAP in a subject having a pathology.

56. The method of claim 54, wherein said CAP is CAP-1.

57. A method for detecting the presence of a nucleic acid molecule encoding a CAP in a test sample, comprising the steps of:

a. obtaining the test sample;

b. contacting said test sample with the nucleotide sequence of claim 12 under suitable conditions, which allow specific binding of said nucleotide sequence to the nucleic acid molecule; and

c. detecting said specifically bound nucleotide sequence, which indicates the presence of said nucleic acid molecule encoding said CAP.

58. The method of claim 56, wherein said detecting identifies an abnormal level of a nucleic acid molecule
encoding a CAP in a subject having a pathology.

59. The method of claim 56, wherein said CAP is CAP-1.